SAF-RC-001
Industrial Hygiene Sampling
FINAL DATA

NO DISTRIBUTION REQUIRED

COMMENTS:

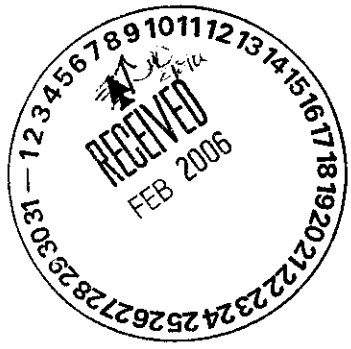
SDG 06I-0474-01 SAF-RC-001

Rad only X Chem only Rad & Chem

X Complete Partial

300 Area 333 Bldg

Cover Page



Report Identification Number: 06I-0474-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF#: RC-001 / R371202000
Payroll#: 72570

Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
02 Feb 2006	J11377	06I03786	NMAM 7300M	G061600L	MCE
02 Feb 2006	J11378	06I03787	NMAM 7300M	G061600L	MCE
02 Feb 2006	J11379	06I03788	NMAM 7300M	G061600L	MCE
02 Feb 2006	J11375	06I03789	NMAM 7300M	G061600L	MCE
02 Feb 2006	J11376	06I03790	NMAM 7300M	G061600L	MCE

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Name: Lisa M. Reid
Title: Chemist
Date: February 08, 2006

DATA CHEM LABORATORIES

Case Narrative Page

Report Identification Number: 06I-0474-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF#: RC-001 / R371202000
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General Set Information: There are 5 samples in set 06I-0474-01 which were analyzed for beryllium, lead and cadmium on MCE filter. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 10 mL of 1:1 (v/v) nitric acid. Samples were digested in a hot block set at 110°C for 40 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

Sample Preparation: All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

Holding Times: The holding times were met for both sample preparation and analysis.

Instrument Calibration: Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Beryllium, cadmium and lead recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of +/- 10%.

Initial and Continuing Calibration Blank Analysis: No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.02 ug/sample. No cadmium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.06 ug/sample. No lead results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.5 ug/sample.

Method Blank Analysis: No beryllium, cadmium or lead was found in the media blank sample above the Contract Required Detection Limit (CRDL).

Dilution(s): NA.

Case Narrative Page

Laboratory Control Sample and Duplicate Analysis: One Laboratory Control Sample (LCS) and one Laboratory Control Sample Duplicate (LCSD) were prepared and analyzed with the sample batch. The LCS result was within the control limit of +/- 20%. The Relative Percent Differences (RPD) between the LCS and the LCSD was within the control limit of 20%.

Replicate Analysis: One sample was replicated with this analysis run. The RPD between the sample and the replicate was within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

Flagging Codes: None

Nonconformance/Corrective Action Report (NC/CAR): N/A

Sample Calculation: The final results are calculated by the following equation:

Final result for aqueous samples (µg/sample) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination (µg/L)

B = Concentration factor from sample preparation

$$= \frac{\text{Final Volume of Digestate (L)}}{\text{Sample}}$$

C = Dilution performed at time of analysis

Example Calculation: (1 µg/L) x (0.025 L/sample) x (1) = 0.025 µg/sample

Miscellaneous Comments: None.

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Report Page

Report Identification Number: 06I-0474-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF#: RC-001 / R371202000
Payroll#: 72570

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Beryllium µg/m³		Air Volume L	
J11377	06I03786	07 Feb 2006	<0.02	U	<0.096	U	209.	
J11378	06I03787	07 Feb 2006	<0.02	U	<0.052	U	382.	
J11379	06I03788	07 Feb 2006	<0.02	U	<0.051	U	390.	
J11375	06I03789	07 Feb 2006	<0.02	U	**		0.00	
J11376	06I03790	07 Feb 2006	<0.02	U	**		0.00	
Limit of Detection (LOD)			0.02					
Required Detection Limit (RDL)								

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Lead µg/sample		Lead µg/m³		Cadmium µg/sample	
J11377	06I03786	07 Feb 2006	2.5		12.		0.14	
J11378	06I03787	07 Feb 2006	0.71		1.9		<0.06	U
J11379	06I03788	07 Feb 2006	<0.5	U	<1.3	U	<0.06	U
J11375	06I03789	07 Feb 2006	<0.5	U	**		<0.06	U
J11376	06I03790	07 Feb 2006	<0.5	U	**		<0.06	U
Limit of Detection (LOD)			0.5				0.06	
Required Detection Limit (RDL)								

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cadmium µg/m³	
J11377	06I03786	07 Feb 2006	0.67	
J11378	06I03787	07 Feb 2006	<0.16	U
J11379	06I03788	07 Feb 2006	<0.15	U
J11375	06I03789	07 Feb 2006	**	
J11376	06I03790	07 Feb 2006	**	
Limit of Detection (LOD)				
Required Detection Limit (RDL)				

Report Page

U - Parameter not detected above LOD.
J - Parameter between LOD and RDL.

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QC Summary Page

Report Identification Number: 06I-0474-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF: RC-001 / R371202000
Payroll#: 72570

Batch ID: G061600L

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-241016-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-241016-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
BL-241016-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
QC-241016-1	LCS	Beryllium	µg/sample	10.5	NA	10.0	105.	NA
QC-241016-1	LCS	Lead	µg/sample	102.	NA	100.	102.	NA
QC-241016-1	LCS	Cadmium	µg/sample	31.2	NA	30.0	104.	NA
QD-241016-1	LCSD	Beryllium	µg/sample	10.5	10.5	10.0	105.	0.0666
QD-241016-1	LCSD	Lead	µg/sample	104.	102.	100.	104.	1.31
QD-241016-1	LCSD	Cadmium	µg/sample	31.5	31.2	30.0	105.	1.08

MB - Method Blank
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MSD - Matrix Spike Duplicate
LD - Laboratory Duplicate

NA - Not Applicable
ND - Parameter not detected above LOD

LCS, LCSD Percent Rec. = (Result / Target) * 100.0
MS, MSD Percent Rec. = ((Result – Parent) / Target) * 100.0

LCS, LCSD Relative Percent Diff. = ((|LCS – LCSD|) / ((LCS + LCSD)/2.0)) * 100.
MS, MSD Relative Percent Diff. = ((|MS – MSD|) / ((MS+ MSD)/2.0)) * 100.
LD Relative Percent Diff. = ((|Parent – LD|) / ((Parent + LD)/2.0)) * 100

Washington Closure Hanford

DUI.0474.01

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: CJ Williams	Company Contact: Denise A. Pitts and Henry W. Ruby	Telephone No. 531-1229	Project Coordinator: Joan H. Kessner	Data Turnaround: 24 hrs
Payroll #: 72570	Sampling Location: 300 area/333 B106	SPECIAL INSTRUCTIONS: All relevant COAs must be provided: 237120 2000	SAF No. RC-001	
Type of Sample: Personals		ANALYSIS METHOD (SPECIFIC): NIOSH 7300	Method of Shipment: Fed Ex	
Shipped To: Datachem Salt lake city UT	Wipe Sample Media: Ghost ☐ Yes ☐ No; Other ____		Bill of Lading/Air Bill No. 8544 9435 4737	
POSSIBLE SAMPLE HAZARD/REMARKS: Be/Cd/Pb	MATRIX: A - AIR; WI - WIPE; X - OTHER			
Special Handling and/or Storage: N/a				

Preservation (i.e., cooling required, etc.): No (for each analysis column)

SAMPLE ANALYSIS

SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area ____ cm²	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne	
J11377	A	2-2-06	209			X	X	DUI 03786				X	CJW 2-2-06
J11378	↑	↑	382	CJW		X	X			87		X	
J11379			390	2-2-06		X	X		CJW 2-2-06	88		X	
J11375	↓	↓	N/a			X	X			89		X	
J11376	A	2-2-06	N/a			X	X			90		X	

CJW 2-2-06

WCH-SH-202 (08/29/2005)

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COC Page

Enter on line below the first Sample Number from Page One:

J11377

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Sign	DATE / TIME	Received By/Sign	DATE / TIME
cynthia williams / cynthia williams	2-2-06 / 1430	3746 BLDG Rm 16 locked cabinet	2-2-06 / 1430
locked cabinet bldg 3746 Rm 16; Goldie Malhan / Goldie Malhan	02-06-06 / 1500	RZ Steffler / R.Z. Steffler	2-6-06 / 1500
RZ Steffler / R.Z. Steffler	wct 2-6-06 / 1600	Fed Ex	
FedEx		Meridel Edward	Feb06/935
Meridel Edward	Feb06/935		

LABORATORY SECTION	Received By	Title	DATE / TIME
	Meridel Edward		Feb06/935

REVIEWED BY: ______________________ DATE: ______

PRINT/SIGN NAME

WCH-SH-202 (08/29/2005)

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Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: CJ Williams	Company Contact: Denise A. Pitts and Henry W. Ruby	Telephone No.: 531-1229	Project Coordinator: Joan H. Kessner
Payroll #: 72520	Sampling Location: 300 area / 333 B106	SPECIAL INSTRUCTIONS: All relevant COAs must be provided: B37120 2000	SAF No.: RC-001
Type of Sample: Personals	Wipe Sample Media: Ghost ☐ Yes ☐ No; Other	ANALYSIS METHOD (SPECIFIC): N10SH 7300	Method of Shipment: Fed Ex
Shipped To: Datachem Salt lake city UT			Bill of Lading/Air Bill No.: 8544 9435 4737
POSSIBLE SAMPLE HAZARD/REMARKS: Be/Cd/Pb	MATRIX: A - AIR; WI - WIPE; X - OTHER	Preservation (i.e., cooling required, etc.)	Data Turnaround: 24 hrs
Special Handling and/or Storage: N/a			

SAMPLE ANALYSIS					No	No	No	No	No	No	No	No
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area ____ cm²	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne
J11377	A	2-2-06	209			X	X					X
J11378	↑	↑	382			X	X					X
J11379			390			X	X					X
J11375	↓	↓	N/a			X	X					X
J11376	A	2-2-06	N/a			X	X					X

CJW 2-2-06

CJW 2-2-06

CJW 2-2-06

CJW 2-2-06

COPY

FIELD SAMPLE COPY

Enter on line below the first Sample Number from Page One:

J11377

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Stored:	DATE / TIME:	Received By/Stored:	DATE / TIME:
Cynthia Williams/Cynthia Williams	2-2-06/1430	3746 Bldg Rm 16 locked cabinet	2-2-06/1430
locked cabinet bldg 3746 Rm#16			
Goldie Malhan Goldie Malhan	02.06.06/1500	RZ Steffler R.J. Steffler	2-6-06 / 1500
RZ Steffler R.J. Steffler	WCH 2-6-06 / 1600	Fed Ex	

LABORATORY SECTION	Received By	Title	DATE / TIME

REVIEWED BY: _____ DATE: _____

PRINT/SIGN NAME